



Annual Report

OF THE

PUBLIC HEALTH

OF THE

NEWTON ABBOT

(RURAL) AND

Newton Abbot and Dawlish

(URBAN)

SANITARY DISTRICTS

FOR 1895

BY

W. HARVEY, F.R.C.S.,

Medical Officer of Health.

NEWTON ABBOT:

DANIEL VILE, "ADVERTISER" OFFICES,
MARKET STREET.



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| PLACES. 1895. | Birth-rate | Annual Death-rate per 1,000 of population. | | | | | | | | Deaths under one year to every 1000 births | |
|-------------------------|------------|--|------------------------|-----------|---------|-------------------|------------|------------|--------------------|--|-----------|
| | | Total Death-rate | From seven Zymotics | Small-pox | Measles | Whooping Cough | Scarlatina | Diphtheria | Continued Fever | | Diarrhoea |
| England and Wales | 30·3 | 18·7 | 2·14 | ·007 | ·37 | ·30 | ·14 | ·25 | ·18 | ·89 | 161 |
| Newton, rural | 23·9 | 14·3 | ·97 | ... | ·57 | ·16 | ·04 | ... | ·16 | ·04 | 117 |
| Newton, urban | 26·8 | 17·5 | 1·41 | ... | ·54 | ·33 | ·22 | ·10 | ·22 | ... | 126 |
| Dawlish | 19·1 | 16·4 | nil | ... | ... | ... | ... | ... | ... | ... | 168 |

ANNUAL REPORT.

1895.

NEWTON ABBOT (RURAL).

VITAL STATISTICS.—The number of deaths registered in the above district during the year 1895, was 353, of which 163 were in males and 190 in females, equal to an annual rate of 14·27 per 1000 of population. In addition to this there were twelve deaths in the workhouse, assignable to the rural parishes. With two exceptions this is the most satisfactory rate yet shown in the annals of the locality, and absolutely the lowest when epidemic measles has prevailed.

Under the age of one year there were 69 deaths ; between 1 and 5 years, 27 ; between 5 and 15 years, 15 ; between 15 and 25 years, 17 ; between 25 and 35 years, 11 ; between 35 and 45 years, 16 ; between 45 and 55 years, 23 ; between 55 and 65 years, 33 ; and over the latter age, 142.

The infantile death-rate, the deaths under one year to every 1000 births, was 117.

The number of deaths in each quarter of the year was successively 123, 91, 67 and 72, all with the exception of the second being less than in the preceeding year.

The births of 297 male and 294 female children give an annual rate of 23·89, a slight increase on the previous year, but otherwise the lowest yet recorded. The natural increase of population, the excess of births over deaths, after due allowance for those in the workhouse, was 226, which is 47 more than in the year 1894. It is satisfactory also to be able to add that the number of fatalities from consumption was only sixteen, which is much the lowest figure yet attained, and that only ten are attributed to the other forms of tubercle. Cheapness of food, with full employment, and improved housing are the chief

factors in the causation of this improvement. It is in my view a most important point, and indicates that the constitutions of the people are progressing, and of even more importance in estimating the benefit of sanitation than references to zymotic disease. Formerly the annual number of deaths registered from consumption was oftener over 40 than below, and on more than one occasion was the maximum of 49 attained; whereas now 40 has not been reached since 1885, and in more recent years the figure has on two occasions sunk below 20.

| Death-rate, &c., in each parish. | | | | | | | | | | | | | |
|----------------------------------|--------------------|------------|---------|------------|-----------|-----------|-------------|---------------------------|----------|--------|---------------------|----------------------------|------------------|
| PARISHES. | Ordinary Zymotics. | | | | | Influenza | Consumption | Other Tubercular Diseases | Apoplexy | Cancer | Inanition Infantile | Total Death-rate per 1000. | |
| | Whooping Cough | Scarlatina | Measles | Diphtheria | Diarrhoea | | | | | | | | Continued Fever. |
| Ashburton | 4 | ... | 4 | ... | ... | ... | 2 | 1 | 3 | 4 | 3 | 3 | 23·2 |
| Abbotskerswell ... | ... | ... | 2 | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | 13·9 |
| Bickington..... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | 17·4 |
| Bishopsteignton ... | ... | ... | ... | ... | 1 | ... | ... | 3 | ... | 1 | ... | 1 | 10·1 |
| Bovey Tracey | ... | ... | ... | ... | ... | 1 | ... | 3 | ... | 1 | ... | ... | 11·8 |
| Buckland | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 14·1 |
| Broadhempstone ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | 11·4 |
| Coffinswell..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 10·4 |
| Coombe, Haecombe .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 9·2 |
| Chudleigh | ... | ... | 4 | ... | ... | ... | 1 | 2 | 1 | 6 | 1 | ... | 18·5 |
| Denbury, Torbrian .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 5·8 |
| Dawlish | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | 1 | ... | 15·4 |
| The Ogwells | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 9·7 |
| Highweek | ... | ... | 1 | ... | ... | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 14·3 |
| Hennock..... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 16·1 |
| Ilsington | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 5·0 |
| Ipplepen | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 9·7 |
| Ideford | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 7·0 |
| Kingskerswell | ... | 1 | ... | ... | ... | ... | 1 | 3 | ... | ... | ... | ... | 15·0 |
| Kingsteignton | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 | ... | 1 | 10·0 |
| Lustleigh | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 14·8 |
| Moreton | ... | ... | ... | ... | ... | ... | 2 | ... | 1 | 3 | 3 | ... | 16·2 |
| Manaton..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | nil |
| North Bovey..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 9·8 |
| Stoke | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | 7·8 |
| Trusham | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 24·8 |
| Teigngrace | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 1 | ... | 29·4 |
| Widdicombe | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | 1 | 1 | ... | 17·5 |
| Woodland | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5·4 |
| | 4 | 1 | 14 | — | 1 | 4 | 14 | 16 | 10 | 26 | 18 | 8 | ... |

Violent deaths are not included.

Table of Deaths occurring during the Year 1895, in the several Districts of the Newton Abbot Rural Sanitary Authority, classified according to Diseases and Ages, and shewing the Death-rate, Birth-rate, and Population of each District.

| DISTRICTS. | Population. | BIRTHS. | | DEATHS. | | | | | MORTALITY FROM SUBJOINED CAUSES. | | | | | | | | | | | | | | | |
|-------------------|-------------|-------------|--------------------------------|--------------|--------------------------------|---------------|----------------|-----------------|-----------------------------------|------------|----------|-------------|-------------|-----------------|-------------------|----------|--------------------|------------|-----------|----------------------------------|-----------------|-----------|-----------------|-----------------|
| | | Registered. | Birth-rate per 1,000 annually. | At all Ages. | Death-rate per 1,000 annually. | Under 1 year. | 1 and under 5. | 60 and upwards. | Under 1 Year to every 1000 births | Small-pox. | Measles. | Scarlatina. | Diphtheria. | Whooping Cough. | Continued Fevers. | | | Diarrhoea. | Phthisis. | Bronchitis, Pleurisy, Pneumonia. | Heart Diseases. | Injuries. | Other Diseases. | |
| | | | | | | | | | | | | | | | Typhus. | Typhoid. | Other or Doubtful. | | | | | | | |
| Newton (Rural) | 7,226 | 186 | 25·7 | 86 | 11·9 | 18 | 7 | 39 | 97 | .. | 4 | .. | .. | .. | .. | 2 | .. | .. | 2 | 16 | 7 | 3 | 52 | Other Diseases. |
| Chudleigh | 6,703 | 160 | 23·9 | 99 | 14·8 | 21 | 7 | 42 | 131 | .. | 6 | .. | .. | .. | .. | .. | 1 | 1 | 8 | 17 | 11 | 5 | 50 | |
| Ashburton | 5,516 | 126 | 22·8 | 94 | 17·0 | 17 | 9 | 44 | 135 | .. | 4 | .. | .. | 4 | .. | .. | .. | .. | 2 | 14 | 9 | 2 | 59 | |
| Moretonhampstead | 2,692 | 58 | 21·5 | 37 | 13·7 | 4 | .. | 26 | 69 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 8 | 1 | 1 | 26 | |
| Sea-border | 2,600 | 61 | 23·5 | 37 | 14·2 | 9 | 4 | 10 | 148 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 4 | 15 | 2 | 4 | 11 | |
| TOTALS, 1895..... | 24,737 | 591 | 23·9 | 353 | 14·3 | 69 | 27 | 161 | 117 | .. | 14 | 1 | .. | 4 | .. | 3 | 1 | 1 | 16 | 70 | 30 | 15 | 198 | |
| " 1894..... | 24,681 | 563 | 22·8 | 378 | 15·3 | 64 | 27 | 159 | 114 | .. | .. | .. | 1 | 11 | .. | 5 | .. | 3 | 28 | 75 | 44 | 17 | 194 | |
| " 1893..... | 26,626 | 652 | 24·4 | 391 | 14·7 | 70 | 32 | 177 | 107 | .. | .. | 2 | 3 | 7 | .. | 2 | .. | 4 | 37 | 61 | 40 | 13 | 222 | |
| " 1892..... | 26,440 | 678 | 25·6 | 418 | 15·8 | 57 | 29 | 207 | 84 | .. | 1 | .. | .. | 2 | .. | .. | .. | 6 | 19 | 88 | 36 | 21 | 245 | |
| " 1891..... | 26,340 | 665 | 25·2 | 403 | 15·3 | 71 | 37 | 193 | 107 | .. | 12 | 3 | .. | 11 | .. | .. | .. | 3 | 36 | 57 | 18 | 14 | 247 | |
| " 1890..... | 25,800 | 672 | 26·0 | 443 | 17·2 | 98 | 52 | 174 | 146 | .. | .. | .. | 3 | 17 | .. | 2 | 1 | 2 | 31 | 83 | 48 | 18 | 238 | |

| Record of Water Analysis. | | | | | | | | | |
|---------------------------|---|---------|------------------|-----------|---------------------|------------------|----------------------|---------------|--|
| No | Source. | Date. | Grains per Gall. | | Parts per 1,000,000 | | | Oxygen taken. | REMARKS. |
| | | | Total Solids | Chlorine. | Free Ammonia. | Organic Ammonia. | Nitrogen from Acids. | | |
| 1 | Well at Elmfield, Coombe. | Feb.15. | 37.0 | 7.06 | .03 | .22 | ... | not large | physically unfit to drink. |
| 2 | Do. after cleaning. | Apl. 8. | 38.0 | 8.2 | .01 | .13 | ... | small | a little milky. quality inferior. |
| 3 | Granitic Spring at Middlecombe.Lustleigh. | Sep.18. | 7.0 | .83 | .03 | .04 | ... | very small | excellent quality, but contains a little vegetable matter. |
| 4 | Mr. Evans's well, Cross St., Moreton. | Nov.21. | 100.0 | 53.0 | .03 | .18 | ... | large | utterly unfit for use. |
| 5 | 6 & 7, St. Leonard's Terrace, Newton Abbot. | Jan. 4. | large | 3.8 | .02 | .06 | ... | moderate | good, but subject to intermittent pollution especially during rain. Water occasionally stank; well closed. |

The other chief causes of mortality besides those given in the larger table, were influenza, 14 deaths; constitutional diseases, excluding tubercle, 22, of which 18 were from cancer; diseases of the nervous system, 43, of which 26 were due to apoplexy; diseases of the heart and organs of circulation, 35; of the respiratory system, 79; of the digestive, 19; of the urino-genital, 7. Six were attributed to premature birth, 37 to old age, 14 to the various forms of violence, and 10 to ill-defined causes, mostly infantile inanition.

The meteorological characteristic of 1895 was a long continued and severe frost in the spring, and a rainfall of about 38 inches.

ZYMOTIC DISEASES. — From the seven ordinary diseases of this class there were 24 deaths, viz., scarlatina, 1, whooping cough, 4; measles, 14; continued fevers, 4; and diarrhœa, 1. Besides these there were 2 deaths from septicæmia, and one from erysipelas. The zymotic death rate amounts to nearly one (.97) per 1000.

MEASLES.—This has been widely diffused during the year, although most of the fatalities were in Chudleigh and Ashburton. In the former place it prevailed during the bitter cold of the spring, and in the latter, in the winter quarter, was associated with whooping cough. It prevailed extensively in other populous places, notably in Bovey, Highweek, Cockwood, Stoke, Abbotskerswell, Chudleigh Knighton, &c. In the majority of these places it caused no deaths, and the type of the diseases was, speaking generally, the mildest which I have yet experienced in this district. Certain experiences pointed to its communicability during late convalescence.

WHOOPIING COUGH.—There has been little of this: the four deaths assigned to it were all in Ashburton, where it was prevalent at the same time as measles.

SCARLATINA.—Numerous cases in many different places have come under observation, amongst the larger communities being Kingskerswell and Kingsteignton. The only death registered was in the former of these, very early in the year. It does not call for any special remark; and was in every respect of the same type that has recently been prevalent, only a minority of cases having medical assistance, and very few indeed being severe. Where large distances have to be covered, it is difficult to deal with it in the individual sense, and attempts to do so would monopolize all the time of sanitary officers.

DIPHTHERIA.—No cases, or at all events, no distinct cases of this disease have been noted.

DIARRHŒA.—There has been no serious outbreak of this, and the only death assigned to it was in an infant.

TYPHOID FEVER.—There has not been a large amount of this, although from various causes, the deaths under this name are in excess of the average. It was as usual most pronounced in the village of Kingsteignton, and even the tremendous floods of the previous November, which had not been equalled for forty years, and which temporarily cut off the communication between it and Newton, had only the effect apparently of reducing the disease somewhat. I have noted, however, about eight cases there, and the serious outbreak in a large family at Whitehill Terrace, Highweek, which caused the death of the father and one of the children, was probably of Kingsteignton origin, as the first case was in a young adult who passed the Whitsuntide week in perhaps the most objectionable part of the centre of that village, and was taken ill within about three weeks of returning to her home: moreover, there were no other cases in the remaining eleven houses comprised in Whitehill Terrace, although under the same sanitary conditions. Individual cases at Teigngrace, Preston, and Chudleigh road, all near Kingsteignton, were not improbably likewise contracted there. An isolated and fatal case happened in a lonely villa in the neighbourhood of Lustleigh: this house

had a satisfactory water supply at all events for drinking purposes, and except for the presence of an indoor earth-closet, was without visible sanitary defect. There were also two or three suspicious cases in the group of dwellings at Moreton known as the Island : this family used well water of an inferior character.

It is gratifying to be at length able to utter the name Kingsteignton hopefully in relation to its much needed water supply, for there is now a genuine prospect of the work being carried out. The credit of this is entirely due to Lord Clifford, and but for his generosity, and farther, but for his taking the matter energetically into his own hands, the ten years that have been passed in feeble debates and childish negotiations would have been indefinitely prolonged. His Lordship has consented to give the village one fifth (about 50,000 gallons a day) of the Holywell spring in his own park, and although the settled condition of the property renders a valuation (£40 a year) necessary, yet he will forego all payment during his lifetime : it is more than probable that his successor will emulate the good example. The whole proceeding seems to give universal satisfaction, and I hear no word against it from anyone. The proportion of water mentioned can be abstracted without impairing the natural beauty of the spring and its surroundings.

SANITARY WORK.—A good deal of this has in various ways been effected. The drainage of the Manor House, Kingskerswell, in which recurrent typhoid arose from the drain outlet in the adjacent field being covered, has been rectified. In Highweek several improvements have been made or ordered in the drainage of Whitehill Terrace, Alma Cottages, Back Lane, Exeter Road, and a long reach of sewer has been laid in Mill Lane. The renovation of the sewers of Moreton is progressing. Treleaven's and the Island Courts in that town have been put to rights, and numerous other improvements carried out. At Ashburton 200 feet of sewer has been put down at Wesley Hill. At Bovey, Kingsteignton, and other places, many small works in regard to water supplies and drainage have been effected, and a new sewer has been ordered for the village of Whilborough. The people of Bishopsteignton are about to improve their water supply by the inclusion of the Hollowcombe spring at a cost of £750. Although there were several years civil feuds, and at least three Local Government Board inquiries over the original question of water for this place, this additional expenditure meets with no opposition : such is the appreciation

extended to a water supply when its advantages are once experienced : when the proposed augmentation is introduced, it would be well to remove the existing stand-pipes from the streets, as there will be ample water for every house. When Kingsteignton is supplied, the only remaining place in the district having 1000 inhabitants, and dependent for water on wells, springs, &c., will be Kingskerswell. Mr. Segar has laid an estimate of £3,965 for the introduction of water here. The lesser improvements in various localities are too numerous to mention in detail. In our small towns and with particular application to Bovey, I have urged on the Council the advisability of providing a system of house scavenging, such as works well and gives satisfaction in Ashburton. Bovey contains about 2000 persons and the scavenging is restricted to the sweeping of the streets ; the people, therefore, throw their refuse outside for the scavenger to take away : a sewer, too, behind Fore Street is here much required. Experience has shown that it is imperatively necessary on the part of the Council to forbid local masons from meddling with the public sewers, as they often make the junctions badly and damage the sewers in the process. The question of an isolation hospital serving the more populous and the more central parishes in conjunction with the urban district of Newton Abbot is in the hands of the County Council. During the year house to house inspections have been made in Bovey, Kingskerswell, and some villages.

Mr. S. Segar and Mr. Riggs, Inspectors of Nuisances, report the following sanitary operations in their department :

The inspection of 954 dwelling houses and 450 re-inspections have been carried out ; slaughter-houses and drains are periodically examined. Of 141 notices served 110 have been complied with ; 23 notices for water supply have been issued, but only eight have yet been conformed to ; five wells have been closed as unfit for use ; out of six overcrowdings reported five have been abated ; 34 new closets erected and several privies abolished ; three houses have been closed as unfit for habitation and two slaughter houses have been condemned as improper structures ; 20 notices have been served under the Dairies order and four of these places have been closed until the bye-laws are obeyed. Proceedings have been taken in two cases only ; orders were made in both instances, a house being closed in one and a closet provided in the other. House to house inspections have been made in Bovey, Kingskerswell, Ilsington and Livaton. The drains and sewers of Kingsteignton by house to house visiting and the use of corrosive sublimate solution have been thoroughly disinfected on two occasions ; 12 vent shafts of 4-inch calibre have been fixed to the sewers there in various convenient localities ; a new sewer has been laid at Treacle Hill in the same village and 120 feet at the back of the Post Office there. At Whitehill Terrace 150 feet have been laid and a very noxious cesspit abolished ; in Mill Lane 1000 feet and

in Exeter road, 200 : all these are in Highweek. In Ashburton £10 have been spent in repairing the West Street sewer ; a new one 200 feet long constructed in East Street, and an old one re-laid in Back Lane. A new one of 300 feet has also been made near the Manor House, Kingskerswell, and the offensive cesspit there abolished. Plans for a new roadside sewer at Whilborough in supercession of the filthy open gutter which now exists, have been approved ; work of the same nature has also been sanctioned for Ipplepen. A scheme for the water supply of Kingskerswell is in process of preparation. The water mains of Bovey have been extended to Hatway in the one direction and to the Pottery on the other.



NEWTON ABBOT (URBAN).

In this district there were registered during 1895, 161 deaths, 80 in males and 81 in females, giving an annual rate of 17·50 per 1000. This is the highest number yet attained, and the rate has not been so great for several years, not since 1883. The town, however, is growing rapidly, and not improbably the population is under estimated. In the successive quarters the number of fatalities was 42, 42, 37 and 40. December was the most fatal month, no less than 25 deaths having occurred in it, more than ever happened, in the absence of epidemic disease, in any single month during my experience.

The chief causes of fatality, besides those given in the table, were constitutional diseases (excluding tubercle) 22 deaths, of which one half were due to cancer ; diseases of the nervous system, 18, of which 9 were referred to apoplexy, and 3 to infantile convulsions ; diseases of the digestive organs, 15 ; of the urinary, &c, 6. Ten were attributed to indefinite causes, most debility in young children, 5 to violence and 14 to old age.

Under the age of one year there were 31 deaths ; between 1 and 5 years, 17 ; between 5 and 15 years, 7 ; between 15 and 25 years, 9 ; between 25 and 65 years, 48 ; and over the latter age, 49.

The infantile death-rate, i.e., the deaths under one year to every 1000 births, was 126, against 157 in 1894.

The births of 124 male and 123 female children give a yearly rate of 26·85 per 1000 of population. This is rather less than in the previous year, when it was 27·2. Every year since 1888, the district has shown an increase in this respect, and it is therefore a long time since a decline was manifested

In the Workhouse, situated in Newton Abbot, there were 45 deaths, 21 in males, and 24 in females. They were thus distributed amongst the various sanitary localities comprised in the union: Torquay, 14; Newton Abbot, urban, 8; Teignmouth, 11; St. Marychurch, 0; Dawlish, 0; and the rural parishes, 12.

The natural increase of population, the excess of births over deaths, after including the 8 just mentioned, was seventy-eight.

ZYMOTIC DISEASES.—Thirteen deaths were assigned to the so-called seven ordinary maladies of this class, viz., 2 to typhoid fever, 1 to diphtheria, 2 to scarlatina, 5 to measles, and 3 to whooping cough—equal to an annual rate of 1·41. This can scarcely be called a low figure, but still it is the least that has ever been recorded during any year in which epidemic measles has been prevalent. In addition, one death each is accredited to influenza, syphilis and erysipelas. Of notifications 67 were received.

The year has been characterized by the fourth epidemic of measles which has occurred in the town during the period I have held office. In a population of its size, this disease makes its appearance quadrennially, and hitherto has always begun in the cold month of November. As the town grows, however, this period will be shortened, and the intervals between the epidemics become curtailed. In accordance with this, the disease broke out in the summer of 1895, and it is to this circumstance that the smaller mortality from it is due. Only 5 deaths were registered from it, against 13 in the epidemic of 1891.

Scarlatina was present more or less during the whole year, although during the first quarter, only one case was notified. In April and May attacks became more numerous, and 31 altogether were officially brought to my notice. There were, however, a large number without medical assistance. Two deaths appear from this cause; both might, however, have been with full propriety assigned to the measles that was then prevalent, as both children, very delicate creatures (brethren), had this superadded. Two deaths appear in the returns from typhoid fever; both were young adults, living in better class houses, widely separated from each other, and both died in an early stage of their illness. About nine cases of fever and febricula have come under observation, all quite dissociated, not only in regard to locality, but also in other respects. The Marsh and Quay Road district, in which this disease used to recur every autumn with unfailing regularity, has, during the last three years, been almost entirely free from it. The cause of this has been discussed in a previous report. There were no deaths registered from diarrhœa. It may here be mentioned that the ventilation of sewers by a direct shaft to every new house, has for years past been very fully carried out.

Only one case of diphtheria, a fatal one, was notified. This occurred in a middle-aged lady, living in one of the best houses of the town, the drainage of which withstood the smoke test satisfactorily. It was contracted from a daughter whom she closely nursed during an

attack of sore throat, which developed on returning from a journey to a distant part of the county. The young lady's case was so lightly esteemed, that medical aid was not considered necessary. Experience like this is not uncommon in this treacherous disease. I have been somewhat surprised at the number of cases of erysipelas notified, 13 in number; they were, however, all benign in character.

| | 1895 | 1894 | 1893 | 1892 | 1891 | 1890 | 1889 | 1888 |
|----------------------------------|------|------|------|------|------|------|------|------|
| Smallpox | ... | ... | ... | ... | ... | ... | ... | ... |
| Measles | 5 | ... | ... | 1 | 13 | 1 | ... | ... |
| Scarlatina | 2 | ... | 1 | 1 | ... | ... | 1 | ... |
| Whooping Cough .. | 3 | 16 | 2 | 1 | ... | 13 | ... | 4 |
| Diphtheria | 1 | ... | 3 | ... | 4 | 1 | ... | ... |
| Continued Fevers ... | 2 | 2 | 1 | 1 | ... | 1 | 3 | ... |
| Diarrhoea | ... | ... | 5 | 2 | ... | ... | 2 | 1 |
| Deaths from 7 chief | 13 | 18 | 12 | 6 | 17 | 16 | 6 | 5 |
| Zymotics | 11 | 12 | 13 | 7 | 4 | 8 | 12 | 18 |
| Phthisis | 6 | 4 | 3 | 1 | 3 | 5 | 9 | 3 |
| Others Tubercular ... | 27 | 27 | 26 | 23 | 25 | 24 | 18 | 19 |
| Bronchitis, Pneumonia, &c. ... | 12 | 9 | 10 | 14 | 26 | 16 | 14 | 7 |
| Heart Disease... .. | 5 | 1 | 4 | 3 | 4 | 2 | 1 | 2 |
| Violence | 87 | 76 | 71 | 79 | 65 | 72 | 75 | 60 |
| Other Diseases | 161 | 147 | 159 | 133 | 144 | 143 | 135 | 114 |
| TOTAL FOR EACH YEAR. ... | 17.5 | 16.1 | 15.9 | 15.3 | 16.7 | 16.2 | 15.5 | 13.4 |
| General Death-rate per 1,000 .. | 1.4 | 2.0 | 1.4 | .7 | 2.0 | 1.8 | .7 | .6 |
| Zymotic Death-rate | 26.8 | 27.2 | 26.9 | 26.0 | 25.2 | 24.3 | 23.3 | 23.6 |
| Birth-rate | 126 | 157 | 147 | 116 | 121 | 136 | 90 | 90 |
| Deaths under 1 yr to 1000 births | | | | | | | | |

The question of an isolation hospital for the district in conjunction with the more central and more populous parishes of the rural district of the same name, has thus far progressed, that the matter is now in the hands of the County Council of Devon, which has already held one inquiry on the subject. There is now no discussion as to the advisability of having such an institution, but difficulty is encountered in obtaining, and more still in agreeing on a site: this obstruction removed, the work would soon be undertaken. One or two cases of fever in crowded houses have happened during the year, and had an isolation hospital been in existence, would probably have been treated therein: happily, however, there was no extension of the disease. This, however, is not always the case; indeed, in other parts of the combined districts, I have had a different experience during the year under review.

The Marsh has been enclosed with railings as a public recreation ground: it is still, however, a happy hunting place for the numerous poultry of adjacent residents, as the spaces between the bars of the railings could hardly be sufficiently close to prevent their ingress and egress. Osborne Street has not yet been taken over by the District Council: if this were done it would not only prevent the poultry nuisance, but be also the means of abolishing what now becomes a muddy swamp in wet weather. I have suggested to the Council that poultry should not be allowed in common courtyards; that domestic scavenging should be more frequently carried out; that in the hot weather the sweeping of the main streets, through which so many animals pass, should be constantly attended to, and also the advisability of considering the sanitary benefit that would arise from the enclosures behind houses having rails instead of stone walls.

Mr. Lewis Stevens, Surveyor and Inspector, reports the following important works actually carried out:

In the Totnes Road, 1420 feet of 10 inch sewer, all with patent joints, and fitted with inspection chambers, have been laid: the drainage of all the houses in the locality has been connected to this new system. A similar work has been carried out in St. Leonard's Terrace, requiring 850 feet of 9 and 8 inch pipe. Behind the western block of Lemon Cottages an old culvert has been replaced by 180 feet of modern 7 and 6 inch sewer, having a better fall: at the back of Nos. 1 to 11, Prospect Place, a like improvement has been effected, the drains of 7 houses relaid, and good water closets put in. The old sewer at the back of 64, Queen Street, and the north end of Western Terrace has been taken out and a new one substituted. In Back Lane a similar work has been done in conjunction with the Rural Council, and the drainage and closet arrange-

ments of the houses in Courtenay Street abutting on the Globe yard renovated ; this was urgently necessary. A vast improvement has at length been done in 5 Court, Wolborough Street, which contains 25 houses, although two or three are *en cours de condamnation* : in the first place the existing drains have been replaced with those of a recent type ; the old defective hopper pans have been taken out, and new w.c's substituted ; 9 new w.c's have also been erected, so as to provide one for each dwelling, the shutting of the houses has been attended to, the court lighted, the town water introduced, and the whole of the area completely paved with concrete. At 10 Court, Wolborough St., 5 foul old closets have been removed, and modern ones now fill their places. Besides the above, 130 houses have been inspected and numerous improvements made in them, among which were 25 new drains, 13 new w.c's, 3 supplied with town water, and minor points regarding sinks and yards. That useful instrument, the asphyxiator, has been employed on 70 different occasions, and, as a result, 14 modern w.c's were introduced, the drainage of 20 houses made good, and lesser defects remedied, besides the laying on of water to 15 premises.

One overcrowding has been dealt with ; two wells closed ; three notices for abatement of swine nuisance ; two for poultry ; three for four privies, and one for dirty cistern were served. The drains of the town have been disinfected with perchloride of mercury, a process repeated more than once in the courts and crowded parts.



DAWLISH.

The number of deaths registered in this Urban District during 1895 was 71, of which 34 were in males and 37 in females, equal to an annual rate of 16·38 per 1000 of population; excluding 10 visitors, this sinks to 14·03. A reference to the table will shew that over 1·0 per 1000 of the deaths is assignable to violence, no less than 5 having occurred. The mortality in this respect has been singularly in excess during the last five years. As in 1894, there were no deaths in the workhouse of persons from the locality. In the successive quarters, the numbers were 30, 15, 12 and 24.

Under the age of one year there were 14 deaths; between 1 and 5 years, 2; between 5 and 15 years, none; between 15 and 25 years, 2; between 25 and 65 years, 20; and over the latter age, 33. The infantile mortality was 168 per 1000 births.

The chief causes of fatality other than those given in the table were constitutional diseases (omitting the tubercular group) 6 deaths; diseases of the nervous system, 8 deaths, of which 6 were due to apoplexy; of the heart and vessels, 6; of the respiratory organs, 12; of the digestive, 5; of the urinogenital, 3; of the bones, 1. Five were referred to violence, 6 to old age, and 6 also to inanition, mostly in infants.

The births of 46 male and 37 female children give the low rate of 19·1, the natural growth of population being, therefore, only 12 persons, the same as in the previous year.

ZYMOTIC DISEASES.—There was no fatality from this cause and the rate, therefore, is nil. This, as regards the town of Dawlish and the resident population, has practically been the case during the last 5 years. One erysipelas and two typhoid included all the notifications. This is a very remark-

able result having in view the fact that the town has undergone its periodical visitation of measles (this comes about every fifth year) and that it occurred in the winter quarter. On no other occasion has this zymotic failed, when epidemic, to cause several

| | 1895 | 1894 | 1893 | 1892 | 1891 | 1890 | 1889 | 1888 |
|---|------|------|------|------|------|------|------|------|
| Smallpox | ... | ... | ... | ... | ... | ... | ... | ... |
| Measles | ... | ... | ... | 1 | ... | 3 | ... | ... |
| Scarlatina | ... | ... | ... | ... | ... | ... | ... | 1 |
| Whooping Cough | .. | 2 | ... | ... | ... | 3 | 6 | 2 |
| Diphtheria | ... | ... | 1 | 1 | ... | 2 | ... | ... |
| Continued Fevers | ... | ... | ... | ... | ... | 1 | 2 | ... |
| Diarrhoea | ... | ... | ... | 1 | ... | ... | ... | ... |
| <i>Deaths from 7 chief Zymotics</i> } | 0 | 2 | 1 | 3 | 0 | 9 | 8 | 3 |
| Phthisis | 8 | 5 | 7 | 6 | 8 | 4 | 9 | 8 |
| Others Tubercular | 1 | 6 | 2 | ... | 2 | 5 | 6 | 2 |
| Bronchitis, Pneumonia, &c.... | 10 | 10 | 19 | 12 | 8 | 5 | 4 | 12 |
| Heart Disease | 5 | 4 | 12 | 7 | 12 | 14 | 8 | 8 |
| Violence | 5 | 4 | 5 | 5 | 2 | 4 | 2 | ... |
| Other Diseases | 42 | 37 | 35 | 40 | 39 | 41 | 38 | 41 |
| TOTAL FOR EACH YEAR | 71 | 68 | 81 | 73 | 71 | 82 | 75 | 74 |
| General Death-rate per 1,000 | 16·4 | 15·7 | 18·9 | 17·2 | 16·8 | 18·7 | 17·3 | 17·2 |
| Ditto (excluding visitors) ... | 14·0 | 14·1 | 17·0 | 13·2 | 14·1 | 14·2 | 14·5 | 15·8 |
| Zymotic death-rate | nil | ·5 | ·2 | ·7 | nil | 2·0 | 1·8 | ·7 |
| Birth Rate | 19·1 | 18·5 | 26·6 | 24·7 | 23·1 | 23·7 | 21·3 | 25·9 |
| Deaths under 1 yr to 1000 births | 168 | 162 | 96 | 94 | 51 | 106 | 163 | 81 |

deaths, and, of course, this is a testimony to the mildness of the outbreak. Still, the infantile rate is high and the measles probably contributed to this.

The typhoid fever deserves a brief note, as by the alarm it created, it has led for the first time to a real movement in the direction of an isolation hospital. In October a young servant was brought to her home suffering from this disease : the house was situated under a steep cliff in a badly ventilated situation, contained quantities of the gear that fishermen and boatmen use in their avocations, and was crowded with a numerous family of 9 young people and 2 parents. There were no public means of isolation and when a second case appeared in December, I, fearing it might run through the family, felt constrained to ask the Council for the removal of the unaffected ones, which was promptly carried out.

I have had occasion during the year to give the District Council advice on the following subjects : on all the points noted by Dr. R. J. Reece in his inspection of the town and concerning which a special report was required by the Local Government Board. This supplementary report was read to the Council on June the 19th, and a general concurrence being expressed with its recommendations, a committee was appointed to consider the question of an isolation hospital and a public abattoir, but no action resulted. The slaughter houses on the hill are in an objectionable state, and an abattoir might be made remunerative. The Diseases Prevention Act and the Public Health Amendment Acts were adopted. By instruction, I reported certain houses as unfit for habitation : some of these are still occupied but falling into dilapidation. I made an earnest remonstrance on one occasion against plans for houses being passed not shewing a back door, giving access to the scavenger. This was met by the plea that the bye-laws do not exact such. The bye-laws should be altered to meet this point, the sanitary importance of which cannot be over-estimated. The cart of the scavenger, too, should be a covered vehicle, so that the air of the streets be not polluted when the refuse is dry and the weather a little breezy. I have further had occasion to speak on the following points : the closure of the remaining wells ; the water supply ; the ventilation and flushing of sewers ; the notification of diarrhœa ; registration of disease ; the keeping of poultry in courtyards common to more than one house ; and on an ill-founded accusation of river impurification from the churchyard. The submarine sewer gives great satisfaction, although on one occasion it required clearing, a somewhat troublesome undertaking. My personal opinion is that the adoption of this system has been a great blessing to the town : there is no storage of sewage, discharging noxious fumes

in the direction of the houses, and as the head of the liquid within the pipe is always higher than that in the sea outside, it follows that the pressure is always towards the outlet.

Mr. J. S. Delbridge, Surveyor and Inspector of Nuisances, gives the following details of work done in his department :—

The use of the smoke test has led to the drainage of 27 houses being improved or renewed, and in many instances to the introduction of modern closets with vent shafts. In High Street the old brick sewer has been taken up and 115 yards of stoneware socket pipes substituted. Fifty visits have been made to bakehouses, dairies, and slaughter houses. Over 200 houses have been inspected. The system of disposal of town refuse to adjacent farmers immediately on collecting works satisfactorily. The outfall sewer is in good condition, effecting its purpose fully. It is now flushed by the river at every low tide through a 12-inch pipe.



